(Continued from page 1)

nance in a process known as program depot maintenance (PDM). The PDM of the F-15 fleet and other aircraft occurs at Warner Robins Air Logistics Center (WR-ALC). PDM activities, by their nature, result in maintenance activities that are carefully regulated by EM.

Following the overhaul process, each aircraft must be tested to ensure that its performance matches original specifications. The test program includes one ground test and two flight tests.

The first flight test occurs in close proximity to Robins. According to Lt. Col. Coleman, this flight pattern is maintained during the initial test flight to enable a rapid return to the Base should flight conditions warrant.

The second test flight occurs after basic functional performance has been established. This flight is conducted to evaluate and confirm the "operating envelope" of each aircraft. The flight pattern for this flight is an approximate "bowtie" centered at Robins and extending 50 miles from the Base. It is during the second flight that sonic booms are heard.

As part of the evaluation of the full range of performance, each aircraft is flown at maximum speed, which is above Mach 1. During this part of the test, the supersonic flight produces the sonic boom. Lt. Col. Coleman stated that, when area residents hear a sonic boom, the aircraft is actually at an altitude of 40,000 feet or more and typically is 8 to 10 miles distant. Sonic booms, when viewed as an essential part of post-maintenance aircraft testing, were described as truly representing the sound of freedom.

Glossary

AFB- Air Force Base
CAP- Corrective Action Plan
EM- Environmental Management Directorate
EPA- Environmental Protection Agency
ERP- Environmental Restoration Program
GA EPD-Georgia Environmental Protection Division
MNA- Monitored Natural Attenuation
NFA- No Further Action
PA- Public Affairs
PDM- Program Depot Maintenance
RAB- Restoration Advisory Board
RIP- Remediation in Place
SVE- Soil Vapor Extraction
WR-ALC-Warner Robins Air Logistics Center

For more information regarding the RAB, contact
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Restoration Advisory Board Members

Mr. Steven Coyle, Robins AFB Installation Co-Chair	**Dr. Dan Callahan,** **Warner Robins** Community Member	**Dr. M.B. Neace,** **Macon** Community Member
Mr. James Harden, Warner Robins Community Co-Chair	**Ms. Marianne Golmitz,** **Warner Robins** Community Member	**Dr. Brian E. Rood,** **Macon** Community Member
Ms. Liz Wilde **U.S. EPA Region 4** Federal Facility, Hazardous Waste Div.	**Dr. Joyce Jenkins,** **Fort Valley** Community Member	**Ms. Kathy Stege,** **Macon** Community Member
Mr. Brent Rabon **GA EPD** Hazardous Waste Management	**Mr. Steve Johnson,** **Macon** Community Member	**Dr. Joseph Swartwout,** **Fort Valley** Community Member
Mr. Kevin Long, Robins AFB Chief, Compliance and Restoration Division	**Mr. Broderick Lowe,** **Warner Robins** Community Member	**Mr. Don Thompson,** **Macon** Community Member
	Mr. Mike Maffeo, **Macon** Community Member	

Robins Air Force Base Restoration Advisory Board (RAB) *Fact Sheet*

A publication of Robins AFB Volume 5, Issue 4, January 2003

The Robins AFB RAB

Recognizing the importance of public involvement in environmental restoration, Robins Air Force Base established the Restoration Advisory Board in 1994. The mission of the RAB is to encourage community participation in the Air Force Environmental Restoration Program cleanup process and allow community members and other stakeholders to have meaningful dialog with Base officials. The RAB includes members from the community, regulatory agencies, and the base, and holds four public forums per year. The RAB serves to advise Robins AFB management and disseminate information to the public.

January RAB Meeting

The winter meeting of the RAB was held January 9, 2003, at the Hampton Inn in Warner Robins, Georgia. The theme of this meeting was "Robins AFB Remediation Program Progress." A technical briefing, a RAB training session, and an update of ERP program progress were presented. The technical briefing focused on sonic booms. The RAB member training session focused on optimizing remediation system performance, and the ERP program update included a five-year review with maps.

This RAB *Fact Sheet* provides a summary of the information and topics discussed in the meeting.
The next meeting will be held on March 13, 2003.

Tour scheduled for March 13, 2003 RAB meeting…

Ms. Charline Logue, RAB Manager, announced at the January RAB meeting that, in accordance with RAB member preferences, the tour will be held in conjunction with the March 13 RAB meeting. Members are invited to dress comfortably, including shoes suitable for walking outdoors.

Sonic Booms an Essential Part of Testing F-15s After Maintenance at Robins

Mr. John Birdsong, Chief of Security, Plans and Programs in the Public Affairs Office, led a briefing that described the reasons that area residents hear sonic booms on occasion. Mr. Birdsong traced the history of the F-15 aircraft at Robins, indicating that the airplane arrived at Robins in 1972. RAB members and guests viewed a videotape that displayed the F-15 in various flight maneuvers and provided a glimpse of the diverse activities in which the craft may participate.

The F-15 fighter aircraft was the subject of a briefing about sonic booms led by Mr. John Birdsong of the PA office and Lt. Col. Kevin Coleman, a test pilot for F-15s tested after completion of program depot maintenance at the Warner Robins Air Logistics Center.

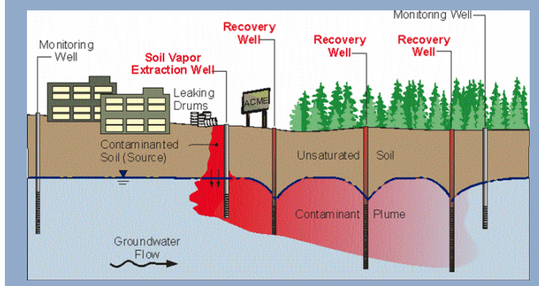
Following the videotape, Mr. Birdsong introduced Lt. Col. Kevin Coleman, one of two F-15 test pilots at Robins, who provided additional details and answered members' questions.

As described by Lt. Col. Coleman, all aircraft in the Air Force inventory undergo periodic overhaul and mainte-

(Continued on page 4)

RAB Member Training: Optimizing Remediation System Performance

Optimizing the operation of remediation systems is a key component in the restoration of contaminated sites, according to RAB member training presented at the January 2003 RAB meeting. A training session presented by **Mr. Greg Roush, P.G.**, of GeoSyntec Consultants, provided details for ensuring that the systems perform well, thus enabling regulatory agencies to reach decisions of "No Further Action" on sites in as favorable a time as possible. During the training session, the example of groundwater contamination was used to illustrate system optimization.



Multiple groundwater recovery wells and a soil vapor extraction (SVE) well are used in this example to achieve remediation of a groundwater plume.

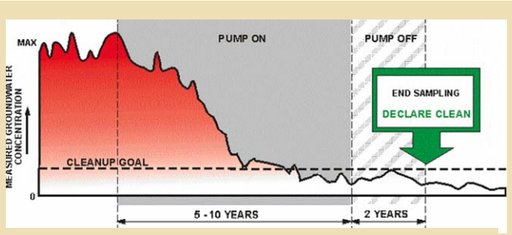
Remedy selection typically follows the investigation and plume definition stage. Following remedy selection, detailed design and construction activities take place, and the remediation system is activated. Remedial systems typically are operated until clean-up criteria are met; these clean-up criteria are established during development of the Corrective Action Plan (CAP). An example in which clean-up criteria have been met is shown in the top graph in the following column.

A Performance Monitoring Plan is completed as part of the remediation program for each site. Performance monitoring includes such items as measurement of groundwater levels, evaluation of the groundwater plume, and determination of mass of constituents removed.

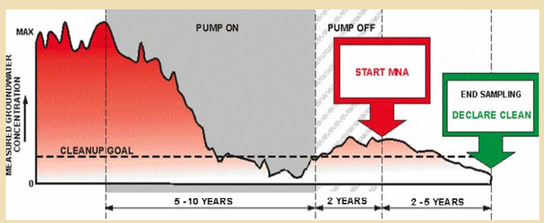
Performance optimization involves review of system performance over time and comparison to CAP goals. The objective of such optimizations is to balance cost effectiveness with environmental stewardship and regulatory requirements.

Recommendations made as a result of performance optimization may include such items as replacement of low producing pumps, change of flow rates in one or more wells, change in sampling frequency, change in sampling contaminant lists, and scaling down of systems as observations warrant.

One consideration in system optimization involves the possible incorporation of natural attenuation. Monitored natural attenuation (MNA) involves the use of natural processes that reduce concentrations as a means of reducing residual concentrations to regulatory levels. One example of natural attenuation discussed involves use of naturally occurring bacteria in the subsurface to degrade residual organic contaminants.



At the conclusion of the active remediation program and post-remediation monitoring, the site depicted in this figure can be declared clean and the corrective action ended.



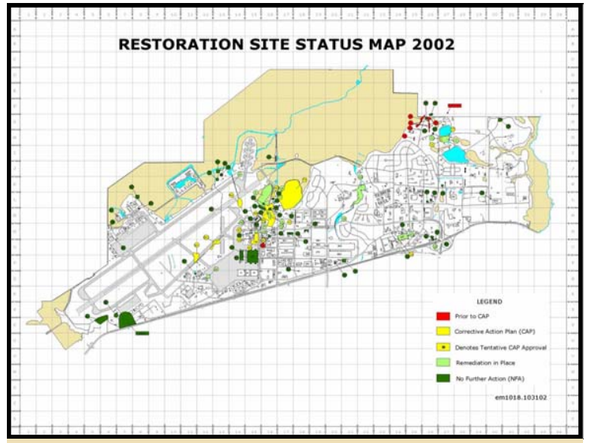
In this example, after the active remediation was concluded, constituent concentrations showed a rebound, and natural attenuation was applied to reduce concentrations below clean-up goals.

ERP Program Update: RAB Presented with Five Year Status Report

Mr. Kevin Long, Chief of the Restoration and Resources Division, briefed the RAB on the five-year status of the Environmental Restoration Program (ERP). To enable RAB members to visualize the progress made during this time, Mr. Long presented three maps, showing site status during 1997, 2000, and 2002.

In 1997, major investigations were underway, as indicated in red on the maps, with CAPs in place (shown in yellow) for only two sites. By 2000, a number of sites were closed by the regulatory agencies with NFA status (dark green) and remediation systems were in place at others (light green.)

By 2002, most sites had achieved NFA status. RAB members complimented the Base on the remarkable progress made and the vivid depiction of the progress shown on these maps.



At the January RAB meeting, this graphic for 2002 was presented along with two others, showing restoration site status for 1997 and 2000. Dark green circles indicate sites that have been determined by the regulatory agencies to have attained the status of "No Further Action" or NFA.

Our Web address:
www.em.robins.af.mil

RAB Bids Farewell to Liz Wilde; Welcomes Dawn Taylor

At the January RAB meeting, Liz Wilde addressed the RAB members and thanked them for their continued commitment (upper left). During the 2002 Restoration Sites Tour, Ms. Wilde, Brent Rabon, Maj. Gen. Wetekam, and Mr. Coyle hear a briefing on Landfill 4 (upper right). Below, Liz participates in discussion at a RAB meeting during 2001.

Ms. Liz Wilde, RAB Member and U.S. EPA Remedial Program Manager for Robins AFB, addressed the RAB meeting on January 9, 2003, during her final meeting in her official capacity. After 11 years on the RAB and predecessor organizations, Liz passed the torch of responsibility to Dawn Taylor, who was also in attendance. During her years as a RAB member, Ms. Wilde indicated that the RAB and the restoration program at Robins have improved dramatically.

Ms. Wilde used the occasion to thank Robins AFB for providing a proactive approach to restoration of contaminated sites and an open dialogue with regulatory agencies and the community. She also praised the RAB membership for their dedication in serving as "conduits" for RAB information back to their local communities. The RAB membership presented Ms. Wilde with a certificate and a scrapbook commemorating her years of service.